



UNITED STATES PATENT AND TRADEMARK OFFICE

205
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------|-------------|----------------------|-------------------------|------------------|
| 09/681,311 | 03/16/2001 | Milton Silva-Craig | 13036US01 | 2494 |
| 23446 | 7590 | 06/14/2006 | EXAMINER | |
| MCANDREWS HELD & MALLOY, LTD | | | GILLIGAN, CHRISTOPHER L | |
| 500 WEST MADISON STREET | | | ART UNIT | PAPER NUMBER |
| SUITE 3400 | | | | |
| CHICAGO, IL 60661 | | | 3626 | |

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/681,311 | SILVA-CRAIG ET AL. | |

| | | |
|-----------------|-----------------|--|
| Examiner | Art Unit | |
| Luke Gilligan | 3626 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 28 March 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-50 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-50 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/28/06 has been entered.

Response to Amendment

2. In the amendment filed 3/28/06, the following has occurred: claims 1, 18, 29, 38, and 47 have been amended. Now, claims 1-50 are presented for examination.

3. The rejections under 35 U.S.C. 112 have been withdrawn by the Examiner based on changes made by Applicants to the claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-10, 12-24, 26-35, and 37-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al., U.S. Patent No. 6,260,021 in view of Rothschild et al., U.S. Patent No. 6,678,703 and further in view of Gropper et al., U.S. Patent No. 7,000,186.

6. As per claim 1, Wong teaches a medical information system, said system comprising: a medical information source, said medical information source providing medical information in a medical information format (see column 3, lines 31-36); a medical image source, said medical

image source providing medical images in a medical image format (see column 3, lines 61-64); an interface unit adapted to receive said medical information wherein said interface unit is adapted to translate said medical information into a medical image format-compatible format (see column 3, lines 42-46), wherein said interface unit adapted to receive said medical image, associating said medical information in said medical image format-compatible format with said medical image, and transmitting said medical information in said medical image format-compatible format and said medical image (see column 4, lines 16-30, note that both medical images and associated medical report data are formatted into a uniform object-oriented structure); and a data center receiving said medical information in said medical image format-compatible format and said medical image in said medical image format and storing said medical information in said medical image format-compatible format and said medical image (see column 8, lines 53-64).

7. Wong does not explicitly teach storing for later retrieval said medical information in said medical image format compatible format and said medical image. Rothschild teaches a data center that includes an archive for storing medical images and medical information for later retrieval (see column 18, lines 45-56). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this archive feature into the system of Wong. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of protecting against data loss by providing redundant storage at multiple locations (see column 17, line 66 – column 18, line 2 of Rothschild).

8. Wong also does not explicitly teach said interface unit is adapted to create associated medical data including at least one of a link to said medical information and said medical information associated with at least one of a link to said medical image and said medical image. Gropper teaches an interface unit adapted to create associated medical data including at least

one of a link to said medical information and said medical information associated with at least one of a link to said medical image and said medical image (see column 3, lines 40-67).

Gropper further teaches a data center receiving said associated medical data and storing said associated medical data (see column 5, lines 42-47). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this association feature into the system of Wong. One of ordinary skill in the art would have been motivated to incorporate such a feature for the purpose of associating medical images with report text, as is common in the art, without modifying or interfering with the report text (see column 2, lines 1-5 of Gropper) to enhancing the retrieval of medical report data with in the system of Wong (see column 4, lines 16-30 of Wong).

9. As per claim 2, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong does not explicitly teach that the datacenter comprises an archive for storing medical images and medical information. Rothschild teaches a data center that includes and archive for storing medical images and medical information (see column 18, lines 45-56). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this archive feature into the system of Wong. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of protecting against data loss by providing redundant storage at multiple locations (see column 17, line 66 – column 18, line 2 of Rothschild).

10. As per claim 3, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches said data center comprises a viewer for allowing access to medical images and medical information (see column 8, lines 53-64).

11. As per claim 4, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches the medical image source comprises a picture archiving and communications system (see column 7, lines 29-37).

12. As per claim 5, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches the medical information source comprises a hospital information system (see column 7, lines 1-6).

13. As per claim 6, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches the medical information source comprises a radiology information system (see column 7, lines 59-60).

14. As per claim 7, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches said data center comprises an application service provider (see column 12, lines 13-17).

15. As per claim 8, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches said data center further comprises an external interface for allowing users to access medical images and medical information at said data center (see column 3, lines 7-14 and column 8, lines 57-61).

16. As per claim 9, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches said medical information comprises radiology information (see column 3, lines 31-36, note that RI systems are radiology information systems).

17. As per claim 10, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches a broker for translating said medical information format (see column 6, lines 18-22).

18. As per claim 12, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches said data center comprises a web server for allowing

access to medical images and medical information via at least one web browser (see column 12, lines 6-19).

19. As per claim 13, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches a DICOM viewing workstation for allowing access to medical images and medical information (see column 11, lines 10-14).

20. As per claim 14, Wong teaches the system of claim 1 as described above. Wong further teaches said data center further stores links to said medical information (see column 13, lines 45-59).

21. As per claim 15, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches said data center further stores links to said medical image (see column 13, lines 45-59).

22. As per claim 16, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches said interface unit transmits a link representing the location of said medical information (see column 14, lines 1-6, the Examiner is interpreting the URL of the image server to be a form of representation of the location of medical information).

23. As per claim 17, Wong in view of Rothschild and Gropper teach the system of claim 1 as described above. Wong further teaches said interface unit transmits a link representing the location of said medical image (see column 14, lines 1-6).

24. As per claim 18, Wong teaches a centralized medical information system, said system comprising: an interface unit adapted to receive medical information wherein said interface unit is adapted to translate said medical information into a medical image format-compatible format (see column 3, lines 42-46), wherein said interface unit is adapted to receive a medical image, associating said medical information in said medical image format-compatible format with said medical image, and transmitting said medical information in said medical image format-

Art Unit: 3626

compatible format and said medical image (see column 4, lines 16-30, note that both medical images and associated medical report data are formatted into a uniform object-oriented structure); and a data center receiving said medical information in said medical image format-compatible format and said medical image in said medical image format-compatible format and storing said medical information in said medical image format-compatible format and said medical image (see column 8, lines 53-64).

25. Wong does not explicitly teach storing for later retrieval said medical information in said medical image format compatible format and said medical image. Rothschild teaches a data center that includes and archive for storing medical images and medical information for later retrieval (see column 18, lines 45-56). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this archive feature into the system of Wong. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of protecting against data loss by providing redundant storage at multiple locations (see column 17, line 66 – column 18, line 2 of Rothschild).

26. Wong also does not explicitly teach said interface unit is adapted to create associated medical data including at least one of a link to said medical information and said medical information associated with at least one of a link to said medical image and said medical image. Gropper teaches an interface unit adapted to create associated medical data including at least one of a link to said medical information and said medical information associated with at least one of a link to said medical image and said medical image (see column 3, lines 40-67). Gropper further teaches a data center receiving said associated medical data and storing said associated medical data (see column 5, lines 42-47). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this association feature into the system of Wong. One of ordinary skill in the art would have been motivated to incorporate such

a feature for the purpose of associating medical images with report text, as is common in the art, without modifying or interfering with the report text (see column 2, lines 1-5 of Gropper) to enhancing the retrieval of medical report data with in the system of Wong (see column 4, lines 16-30 of Wong).

27. Claims 19-24 and 26-28 recite substantially similar additional limitations to those already addressed in claims 2, 3, 7-10, 12, and 16-17 and, as such, are rejected for similar reasons as given above.

28. Claims 29-30 and 31-34 contain substantially similar method limitations as those already addressed with respect to system claims 1-3, 7 and 9 and, as such, are rejected for similar reasons as given above.

29. As per claim 35, Wong in view of Rothschild and Gropper teach the method of claim 29 as described above. Wong further teaches said first format comprises HL7 format (see column 8, lines 6-14).

30. As per claim 37, Wong in view of Rothschild and Gropper teach the method of claim 29 as described above. Wong further teaches said second format comprises as standard text format (see column 12, lines 13-17, since displayed medical information can include "report information" it is assumed that this is displayed as text).

31. Claims 38-39 and 40-46 recite substantially similar method limitations to those already addressed in system claims 1, 3-6, and 12 and, as such, are rejected for similar reasons as given above.

32. Claims 11, 25, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al., U.S. Patent No. 6,260,021 in view of Rothschild et al., U.S. Patent No. 6,678,703

and Gropper et al., U.S. Patent No. 7,000,186 and further in view of Anderson et al., U.S. Patent No. 6,078,925.

33. As per claim 11, Wong in view of Rothschild and Gropper teach the system of claim 10 as described above. Wong further teaches that the broker translates from HL7 format (see column 8, lines 6-14). Wong does not explicitly teach that the broker translates to SQL format. Anderson teaches Relational Extenders that store new data types in an SQL format (see column 3, lines 13-17). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this feature into the system of Wong. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of enabling searching of complex data types (see column 2, lines 10-13 of Anderson) such as medical care data including medical imaging data (see column 1, lines 44-47 of Anderson).

34. Claims 25 and 36 recite substantially similar additional features to those already addressed in claim 11 and, as such, are rejected for similar reasons as given above.

35. Claims 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al., U.S. Patent No. 6,260,021 in view of Gropper et al., U.S. Patent No. 7,000,186.

36. As per claim 47, Wong teaches a method for accessing medical information and images, said method comprising: requesting an associated medical image and medical information for a remote data center (see column 14, lines 12-24); providing medical information from a medical information source to an interface unit (see column 14, lines 28-33); associating said medical information with said medical image (see column 4, lines 16-21); and providing the associated medical information and medical image to said remote data center (see column 14, lines 53-58).

37. Wong does not explicitly teach combining a link to said medical information with a link to said medical image. Gropper teaches combining a link to said medical information with a link to

said medical image (see column 3, lines 40-67). Gropper further teaches providing this combination to a data center (see column 5, lines 42-47). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate this linking feature into the system of Wong. One of ordinary skill in the art would have been motivated to incorporate such a feature for the purpose of linking medical images with report text, as is common in the art, without modifying or interfering with the report text (see column 2, lines 1-5 of Gropper) to enhancing the retrieval of medical report data with in the system of Wong (see column 4, lines 16-30 of Wong).

38. As per claim 48, Wong in view of Gropper teach the method of claim 47 as described above. Wong further teaches the medical information source comprises a hospital information system (see column 7, lines 1-6).

39. As per claim 49, Wong in view of Gropper teach the method of claim 47 as described above. Wong further teaches the medical information source comprises a radiology information system (see column 7, lines 59-60).

40. As per claim 50, Wong in view of Gropper teach the method of claim 47 as described above. Wong further teaches the medical image source comprises a picture archiving and communications system (see column 7, lines 29-37).

Response to Arguments

41. In the remarks filed 3/28/06, Applicants argue in substance that Wong does not teach linking to medical information and medical images nor creating an association between medical images and medical information.

42. In response to Applicants' arguments, it is respectfully submitted that the Examiner has relied upon a new grounds of rejection detailed above in view of Gropper. In particular, the

Examiner has relied upon the teachings of Gropper for creating an association between medical images and medical information at an interface unit. In addition, the Examiner respectfully maintains that Wong does teach linking to medical information and medical images. In particular, it is submitted that the stored references to the image objects and report objects are a form of "link" to images and information as recited in the claim. Furthermore, it is noted that claims 16 and 17 refer to links that represent the location of images and information. Therefore, it is respectfully maintained that the URL of Wong, which is a link representing the location of the server, meets these limitations.

Conclusion

43. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Davis teaches a system for associating data with images in an imaging system.
- Foran teaches a system for creating associations between medical images and medical data.

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke Gilligan whose telephone number is (571) 272-6770. The examiner can normally be reached on Monday-Friday 8am-5:30pm.

45. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571) 272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3626

46. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

6/9/06



C. LUKE GILLIGAN
PATENT EXAMINER